



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,590	03/05/2001	Carsten Ball	0112740-137	5836
29177	7590	09/16/2004	EXAMINER	
BELL, BOYD & LLOYD, LLC			NG, CHRISTINE Y	
P. O. BOX 1135			ART UNIT	
CHICAGO, IL 60690-1135			PAPER NUMBER	
			2663	

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701,590

Applicant(s)

BALL ET AL.

Examiner

Christine Ng

Art Unit

2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16, 17, 21, 24 and 27-30 is/are rejected.
- 7) ☒ Claim(s) 18-20, 22, 23, 25 and 26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 24, 27 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 24 recites the limitation "the first function component" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

Claim 24 recites the limitation "the required function" in line 5 and in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 27 recites the limitation "the central communications units" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 27 recites the limitation "communications-unit" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 28 recites the limitation "the determined cross-correlations" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 16, 17, 21, 29 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,058,136 to Ganesh et al.

Referring to claim 16, Ganesh et al discloses a method for allocating at least one CDMA code (PN offsets), wherein n (512) different CDMA codes (PN offsets) are available, which can be used in the course of a CDMA multiple access method, to cells in a communications system having m cells (Figure 1, Cell sectors 1110,1120,1130). Refer to Column 1, lines 41-48. The method comprising the steps of:

Detecting (Figure 3, Step 3170) adjacent cells. The interference analysis module 2100 determines co-site and neighbor constraints. Refer to Column 6, lines 25-63.

Allocating (Figures 5A and 5B), randomly, at least one CDMA code (PN offsets) to each cell (Figure 1, Cell sectors 1110,1120,1130). The PN assignment module 2300 assigns PN codes to all cell sites. Refer to Column 7, line 25 to Column 8, line 9.

Determining (Figures 4A and 4B, Step 4120) for respectively adjacent cells a disturbance value (co-site and neighbor constraints) which represents a mutual transmission influence of the currently allocated CDMA codes (PN offsets). If the initial PN offset assignment was unsuccessful, the coarse optimization module 2200 resets the co-site and neighbor constraints. Refer to Column 8, lines 33-46.

Determining (Figure 6A) an overall disturbance value which represents a total of all the determined disturbance values (co-site and neighbor constraints). The fine optimization module 2400 prepares for another PN offset assignment cycle using the co-site and neighbor constraints from the coarse optimization module 2200. Refer to Column 8, lines 48-61 and Column 10, lines 18-30.

Varying (Figures 5A and 5B) a number of different CDMA codes (PN offsets) and their allocation to the respective cells (Figure 1, Cell sectors 1110,1120,1130) until a minimum overall disturbance value is reached. The PN assignment module 2300 assigns PN offsets based on the parameters from the fine optimization module 2400 to maximize offset protection. Refer to Column 8, lines 62-64.

Referring to claim 17, Ganesh et al discloses that the method further comprises:

Determining (Figures 4A and 4B, Step 4120) for respectively non-adjacent cells a further disturbance value (neighbor of neighbor constraints) which represents the mutual transmission influence of the currently allocated CDMA codes (PN offsets). If the initial PN offset assignment was unsuccessful, the coarse optimization module 2200 resets the neighbor of neighbor constraints. Refer to Column 8, lines 33-46.

Forming (Figure 6A) the overall disturbance value from a total, which can be weighted, of all the disturbance values (co-site and neighbor constraints) and all the further disturbance values (neighbor of neighbor constraints). Refer to Column 8, lines 48-61 and Column 10, lines 18-30.

Referring to claim 21, Ganesh et al discloses in Figure 1 that the method further comprises allocating at least one CDMA code (PN offsets) to a central communications device (base station) arranged in one cell (Cell sectors 1110,1120,1130). Refer to Column 4, lines 55-63.

Referring to claim 29, Ganesh et al discloses that the allocation of the at least one CDMA code is carried out by software. Refer to Column 5, lines 17-23.

Referring to claim 30, Ganesh et al discloses that the communications system is formed by at least one of a cellular communications network, a wire-based communications network, a cable-based communications network, and a wire-free communications network. The communications system assigns PN offsets to base stations in a CDMA cellular network. Refer to Column 1, lines 6-12.

Allowable Subject Matter

5. Claims 18, 19, 20, 22, 23, 25 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (703) 305-8395. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

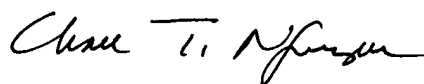
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nguyen Chau can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2663

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C. Ng *ew*
September 10, 2004



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600